

regarding other subject matter that the Examiners were not willing to allow at that time. In this Amendment, the Applicants believe that they have eliminated from the scope of the claims subject matter that the Examiner is not presently inclined to allow, and that the claims pending after entry of this Amendment include only subject matter that the Examiner is willing to allow. The issues raised by the Examiner during the 19 and 20 November 2002 telephone calls are also addressed herein.

Please amend the application as follows.

In the Title:

✓ Please delete the current title and replace it with the following new title:

-- Nucleic Acids Corresponding to TANGO 294, a Gene Encoding a Lipase-Like Protein --

In the Claims:

Please amend claims 1-5, 7, 12, 24-33, and 35-40 to read as follows. For the Examiner's convenience a "**Marked-Up Copy of Claims Amended**" accompanies this Amendment. In that document, text which has been added to the claim is underlined, and text which has been deleted from the claims is ~~struck through~~. The Applicants have also enclosed a "**Clean Copy of Claims, as Amended**," in which all claims that would be pending after entry of this Amendment are listed in an order which the Applicants believe is appropriate for issue.

Please amend claims 1-5, 7, 12, 24-33, and 35-40 to read as follows.

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1. (Thrice Amended) An isolated nucleic acid molecule, or its complement, wherein the isolated nucleic acid i) encodes a polypeptide which exhibits lipase activity and ii) is selected from the group consisting of:

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- a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO: 45 or 46;
- b) a nucleic acid molecule comprising a fragment of SEQ ID NO: 45 or 46;

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c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence encoded by SEQ ID NO: 46;

d) a nucleic acid molecule which encodes a fragment of the amino acid sequence encoded by SEQ ID NO. 46; and

e) a nucleic acid molecule which encodes a variant of the amino acid sequence encoded by SEQ ID NO: 46, wherein the nucleic acid molecule hybridizes in 6× sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

2. (Twice Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the molecule is selected from the group consisting of:

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a) a nucleic acid having the nucleotide sequence of SEQ ID NO: 45 or 46; and

b) a nucleic acid molecule which encodes the amino acid sequence encoded by SEQ ID NO: 46.

3. (Amended) The nucleic acid molecule of claim 1, or its complement, further comprising vector nucleic acid sequences.

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4. (Amended) The nucleic acid molecule of claim 1, or its complement, further comprising nucleic acid sequences encoding a heterologous polypeptide.

5. (Amended) A host cell which contains the nucleic acid molecule of claim 1 or its complement.

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7. (Amended) A non-human mammalian host cell containing the nucleic acid molecule of claim 1 or its complement.

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12. (Thrice Amended) A method for producing a polypeptide that exhibits lipase activity, the method comprising culturing the host cell of claim 5 under conditions in which the nucleic acid molecule is expressed.

24. (Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the nucleic acid molecule has a sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO: 45 or 46.

25. (Amended) The isolated nucleic acid molecule of claim 24, or its complement, wherein the nucleic acid molecule has a sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO: 45 or 46.

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26. (Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the nucleic acid molecule comprises a fragment of SEQ ID NO: 45 or 46.

27. (Amended) The isolated nucleic acid molecule of claim 26, or its complement, wherein the nucleic acid molecule comprises at least 150 nucleotide residues and has a nucleotide sequence identical to at least 150 consecutive nucleotide residues of SEQ ID NO: 45 or 46.

28. (Amended) The isolated nucleic acid molecule of claim 27, or its complement, wherein the nucleic acid molecule comprises at least 500 nucleotide residues and has a nucleotide sequence identical to at least 500 consecutive nucleotide residues of SEQ ID NO: 45 or 46.

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29. (Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the nucleic acid molecule encodes a polypeptide comprising the amino acid sequence encoded by SEQ ID NO: 46.

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30. (Twice Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the nucleic acid molecule encodes a polypeptide comprising a fragment of the amino acid sequence encoded by SEQ ID NO: 46.

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31. (Amended) The isolated nucleic acid molecule of claim 30, or its complement, wherein the nucleic acid molecule encodes a polypeptide comprising at least 25 consecutive amino acid residues of the amino acid sequence encoded by SEQ ID NO: 46.

~~D9~~ 32. (Twice Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the nucleic acid molecule encodes a variant of the amino acid sequence encoded by SEQ ID NO: 46, wherein the nucleic acid molecule hybridizes in 6 \times SSC at about 45°C, followed by one or more washes in 0.2 \times SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

~~D10~~ 33. (Amended) The isolated nucleic acid molecule of claim 30, or its complement, wherein the consecutive amino acid residues comprise an immunogenic portion of the protein having the amino acid sequence encoded by SEQ ID NO: 46.

35. (Amended) The method of claim 12, wherein the polypeptide comprises the amino acid sequence encoded by SEQ ID NO: 46.

D11 36. (Amended) The method of claim 12, wherein the polypeptide comprises a fragment of the amino acid sequence encoded by SEQ ID NO: 46.

~~D12~~ 37. (Twice Amended) The method of claim 12, wherein the polypeptide is a variant of the polypeptide encoded by SEQ ID NO: 46, wherein the polypeptide is encoded by a

D12 nucleic acid molecule which hybridizes in 6× SSC at about 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46, or a complement thereof.

D13 38. (Amended) The method of claim 64, wherein the polypeptide exhibits

lipase activity.

D14 ~~Sub E2~~ 39. (Amended) The isolated nucleic acid molecule of claim 1, or its complement, wherein the molecule hybridizes in 6× SSC at about 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

D15 40. (Amended) The method of claim 65, wherein the polypeptide exhibits

lipase activity.

Please add claims 41-66 as follows.

-- 41. The method of claim 36, wherein the polypeptide is an immunogenic portion of the protein having the amino acid sequence encoded by SEQ ID NO: 46.

42. The method of claim 37, wherein the polypeptide is an immunogenic portion of the protein having the amino acid sequence encoded by SEQ ID NO: 46.

D16 ~~Sub E6~~ 43. An isolated nucleic acid molecule, or its complement, wherein the isolated nucleic acid i) encodes an immunogenic portion of the protein having the amino acid sequence encoded by SEQ ID NO: 46 and ii) is selected from the group consisting of:

a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO: 45 or 46;

b) a nucleic acid molecule comprising a fragment of SEQ ID NO: 45 or 46;

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- c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence encoded by SEQ ID NO: 46;
- d) a nucleic acid molecule which encodes a fragment of the amino acid sequence encoded by SEQ ID NO: 46; and
- e) a nucleic acid molecule which encodes a variant of the amino acid sequence encoded by SEQ ID NO: 46, wherein the nucleic acid molecule hybridizes in 6× sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

44. The isolated nucleic acid molecule of claim 43, or its complement, wherein the molecule hybridizes in 6× SSC at about 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

45. The isolated nucleic acid molecule of claim 43, or its complement, wherein the nucleic acid molecule has a sequence which is at least 90% identical to the nucleotide sequence of SEQ ID NO: 45 or 46.

46. The isolated nucleic acid molecule of claim 45, or its complement, wherein the nucleic acid molecule has a sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO: 45 or 46.

47. The isolated nucleic acid molecule of claim 43, or its complement, wherein the nucleic acid molecule comprises a fragment of SEQ ID NO: 45 or 46.

48. The isolated nucleic acid molecule of claim 47, or its complement, wherein the nucleic acid molecule comprises at least 150 nucleotide residues and has a nucleotide sequence identical to at least 150 consecutive nucleotide residues of SEQ ID NO: 45 or 46.

49. The isolated nucleic acid molecule of claim 48, or its complement, wherein the nucleic acid molecule comprises at least 500 nucleotide residues and has a nucleotide sequence identical to at least 500 consecutive nucleotide residues of SEQ ID NO: 45 or 46.

50. The isolated nucleic acid molecule of claim 43, or its complement, wherein the nucleic acid molecule encodes a polypeptide comprising the amino acid sequence encoded by SEQ ID NO: 46.

51. The isolated nucleic acid molecule of claim 43, or its complement, wherein the nucleic acid molecule encodes a fragment of the amino acid sequence encoded by SEQ ID NO: 46.

52. The isolated nucleic acid molecule of claim 51, or its complement, wherein the nucleic acid molecule encodes at least 25 consecutive amino acid residues of the amino acid sequence encoded by SEQ ID NO: 46.

53. The isolated nucleic acid molecule of claim 51, or its complement, wherein the polypeptide exhibits lipase activity.

but E7 54. The isolated nucleic acid molecule of claim 43, or its complement, wherein the nucleic acid molecule encodes a variant of the amino acid sequence encoded by SEQ ID NO: 46, wherein the nucleic acid molecule hybridizes in 6 \times SSC at about 45°C, followed by one or more washes in 0.2 \times SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46.

55. The isolated nucleic acid molecule of claim 43, or its complement, which is selected from the group consisting of:

- a) a nucleic acid having the nucleotide sequence of SEQ ID NO: 45 or 46; and
- b) a nucleic acid molecule which encodes the amino acid sequence encoded by SEQ ID NO: 46.

56. The nucleic acid molecule of claim 43, or its complement, further comprising vector nucleic acid sequences.

57. The nucleic acid molecule of claim 43, or its complement, further comprising nucleic acid sequences encoding a heterologous polypeptide.

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58. A host cell which contains the nucleic acid molecule of claim 43 or its complement.

59. The host cell of claim 58 which is a mammalian host cell.

60. The host cell of claim 58, which is a prokaryotic host cell.

61. A non-human mammalian host cell containing the nucleic acid molecule of claim 43 or its complement.

62. A method for producing an immunogenic portion of the protein having the amino acid sequence encoded by SEQ ID NO: 46, the method comprising culturing the host cell of claim 58 under conditions in which the nucleic acid molecule is expressed.

63. The method of claim 62, wherein the polypeptide comprises the amino acid sequence encoded by SEQ ID NO: 46.

64. The method of claim 62, wherein the polypeptide comprises a fragment of the amino acid sequence encoded by SEQ ID NO: 46.

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but C 65. The method of claim 62, wherein the polypeptide is a variant of the polypeptide encoded by SEQ ID NO: 46, wherein the polypeptide is encoded by a nucleic acid molecule which hybridizes in 6 \times SSC at about 45°C, followed by one or more washes in 0.2 \times SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46, or a complement thereof.

66. An isolated nucleic acid probe or primer, or its complement, that comprises at least 100 nucleotide residues, has a nucleotide sequence identical to at least 100 consecutive nucleotide residues of SEQ ID NO: 45 or 46, and hybridizes in 6 \times sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2 \times SSC, 0.1% SDS at 50°C with a nucleic acid molecule consisting of the nucleotide sequence of SEQ ID NO: 45 or 46. --

REMARKS

Claims 1-7, 12, and 24-66 are pending following entry of this Amendment. Claims 1-5, 7, 12, 24-33, and 35-40 have been amended. Claims 41-66 have been added. Claims 1, 43, and 66 are the only independent claims. The amendments and additions made herein do not include new matter, as indicated in the following section.

Support in the Specification

The title of the invention has been deleted and replaced with a more descriptive one, per the Examiner's suggestion.

Each of claims 1-5, 7, 12, 24-33, and 35-40 has been amended to recite that the claim refers to the previously recited isolated nucleic acid molecule "or its complement." This recitation is supported throughout the specification, for example at page 2, lines 17-30.